

**REMARKS**

Claims 1, 3-10, and 12-21 are pending in the present application. In the Final Office Action mailed November 17, 2010, the Examiner rejected claims 1, 4-10, and 12-21 under 35 U.S.C. §112, first paragraph, because the specification, while being enabling for increasing the predetermined amount of time as the peripheral region distance from the center region of k-space increases, does not reasonably provide enablement for decreasing the predetermined amount of time as the peripheral region distance from the center region of k-space increases. The Examiner next rejected claims 6-10 and 12-21 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Claims 14-20 were rejected under 35 U.S.C. §112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps.

Claim 3 was indicated as containing allowable subject matter. Such indication is appreciated.

**Rejections under 35 USC §112, first paragraph****Claim 1**

The Examiner rejected claim 1 under 35 U.S.C. §112, first paragraph. *See Final Office Action*, November 17, 2010, p. 2. While Applicant disagrees with the Examiner's rationale for issuing the rejection under 35 U.S.C. §112, first paragraph, Applicant has nonetheless elected to amend claim 1. Applicant has amended claim 1 per the Examiner's suggestion set forth on pages 4-5 of the present Office Action so as to include the subject matter of claim 3. Claim 3 has thus been canceled.

As indicated by the Examiner, upon incorporation of the subject matter of claim 3 into claim 1, claim 1 should now be in condition for allowance. *See Final Office Action*, supra at 2-3. Applicant therefore believes claim 1 to be in condition for allowance and respectfully requests withdrawal of the rejection of claim 1 under 35 U.S.C. §112, first paragraph.

**Claim 6**

The Examiner rejected claim 6 under 35 U.S.C. §112, first paragraph, stating that the Specification "while being enabling for increasing the predetermined amount of time as the peripheral region distance from the center region of k-space increases, does not reasonably provide enablement for decreasing the predetermined amount of time as the peripheral region distance from the center region of k-space increases." *Final Office Action*, supra at 2. Applicant

respectfully disagrees with the rejection. Specifically, Applicant believes that such a statement does not provide a proper basis for a rejection under 35 U.S.C. §112, first paragraph. That is, Applicant nowhere claims a method where the predetermined amount of time is decreased as the peripheral region distance from the center region of k-space is increased. In effect, the Examiner is asserting that the specification fails to enable an element that is not even called for in the present claim, and thus the rejection is clearly erroneous.

As called for in claim 6, the MRI apparatus includes a computer that is programmed to delay a sampling of an MR signal to fill the center region of k-space, with the delay being a function of a distance of an immediately preceding sampled peripheral region of k-space from the center region of k-space. The Specification enables claim 6 by setting forth that the length of delay before sampling the center of k-space increases as the distance from the center of k-space of an immediately preceding sampled region of k-space increases. *Specification*, p. 10, lns. 19-29. Thus, the Specification does enable claim 6 by disclosing that the delay in sampling is a function of a distance of a sampled peripheral region of k-space from the center region of k-space. As such, that which is called for in claim 6 is properly enabled by the Specification.

In light of the above, Applicant believes that claim 6 is properly enabled by the Specification and thus respectfully requests that the Examiner withdraw the rejection of claim 6 under 35 U.S.C. §112, first paragraph.

#### Claim 14

The Examiner rejected claim 14 under 35 U.S.C. §112, first paragraph. In rejecting the claim, the Examiner employed the same rationale as used for claim 6, again stating that the Specification “does not reasonably provide enablement for decreasing the predetermined amount of time as the peripheral region distance from the center region of k-space increases.” *Final Office Action*, supra at 2. As set forth above with respect to claim 6, Applicant believes that such a statement does not provide a proper basis for a rejection under 35 U.S.C. §112, first paragraph, as the Examiner is in effect asserting that the specification fails to enable an element that is not even called for in the present claim. That is, claim 14 does not call for a predetermined amount of wait time to be decreased as the peripheral region distance from the center region of k-space is increased. Instead, claim 14 calls for, in part, a computer readable storage medium including a set of instructions that when executed by a processor causes the processor to partition k-space into a plurality of partitions wherein one partition corresponds to a center of k-space and the other partitions correspond to peripheral regions of k-space, determine a distance from the center of k-space for each peripheral region, sample a peripheral region, and subsequent to sampling of the

peripheral region, delay the sampling of the center k-space by a predetermined value that is a function of the distance of the immediately preceding sampled peripheral region from the center of k-space. The Specification enables claim 14 by setting forth that the length of delay before sampling the center of k-space increases as the distance from the center of k-space of an immediately preceding sampled region of k-space increases. *Specification*, p. 10, lns. 19-29. As such, that which is called for in claim 14 is properly enabled by the Specification.

In light of the above, Applicant believes that claim 14 is properly enabled by the Specification and thus respectfully requests that the Examiner withdraw the rejection of claim 14 under 35 U.S.C. §112, first paragraph.

**Rejections under 35 USC §112, second paragraph - Indefiniteness**

The Examiner rejected each of claims 6 and 14 under 35 U.S.C. §112, second paragraph. In rejecting the claims, the Examiner stated that “[w]ith the addition of the limitation in claim 1 of ‘interleaving sampling of peripheral regions of k-space and samplings of a center region of k-space...’, it remains confusing if the language of claims 6 and 14 sufficiently encompasses the same feature with their respective amended language.” *Final Office Action*, supra at 3.

Applicant respectfully disagrees with the rejection of claims 6 and 14 under 35 U.S.C. §112, second paragraph. Specifically, Applicant believes that the rationale set forth by the Examiner in rejecting claims 6 and 14 does not provide a proper basis for a rejection under 35 U.S.C. §112, second paragraph, as the Examiner is in effect asserting that the limitations set forth in claim 1 somehow render claims 6 and 14 indefinite. As set forth in MPEP §2163, “[e]ach claim must be separately analyzed and given its broadest reasonable interpretation in light of and consistent with the written description.” In determining whether or not claims 6 and 14 are definite/indefinite under 35 U.S.C. §112, second paragraph, the Examiner must analyze each of the claims separately and in light of and consistent with the written description. Thus, for purposes of determining whether claims 6 and 14 are definite/indefinite under 35 U.S.C. §112, second paragraph, the claims are not analyzed in light of claim 1, as the Examiner appears to indicate in setting forth the rejection under 35 U.S.C. §112, second paragraph, but rather are to be analyzed in light of the written description.

Applicant believe that when claims 6 and 14 are properly analyzed in light of the written description, that the claims are not indefinite under 35 U.S.C. §112, second paragraph. Applicant therefore respectfully requests that the Examiner withdraw the rejection of claims 6 14 under 35 U.S.C. §112, second paragraph.

**Rejections under 35 USC §112, second paragraph – Omission of Essential Elements**

The Examiner rejected claim 14 under 35 U.S.C. §112, second paragraph, stating that the claims are “incomplete for omitting essential steps, such omission amounting to a gap between the steps,” and set forth a number of elements omitted from claim 14 that were asserted to be “essential,” citing to MPEP §2172.01 for support of the rejection. *See Final Office Action*, supra at 3. Applicant respectfully disagrees with the rejection and believes the rejection to be improper.

MPEP §2172.01 limits when an element/limitation can be considered an “essential element,” setting forth that “essential matter” is matter that is “disclosed to be essential to the invention as described in the specification or in other statements of record....” The Examiner has not pointed to any language, either in the specification or in other statements of record, wherein Applicant has stated that specific elements identified by the Examiner as being omitted from the claims are essential elements/steps to the invention as claimed. The Examiner is not at liberty to declare elements as “essential” without some indication by Applicant that the element is so critical as being required for enablement. Since Applicant has not made any such statements, a rejection of claim 14 under MPEP §2172.01 based on the omission of essential steps is improper.

For at least this reason, Applicant believes that the rejection of claim 14 under 35 U.S.C. §112, second paragraph, is improper and respectfully requests withdrawal thereof.

Therefore, in light of at least the foregoing, Applicant respectfully believes that the present application is in condition for allowance. As a result, Applicant respectfully requests timely issuance of a Notice of Allowance for claims 1, 4-10, and 12-21.

Applicant appreciates the Examiner’s consideration of these Amendments and Remarks and cordially invites the Examiner to call the undersigned, should the Examiner consider any matters unresolved.

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**General Authorization and Extension of Time**

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 07-0845. Should no proper payment be enclosed herewith, as by credit card authorization being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 07-0845. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extensions under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 07-0845. Please consider this a general authorization to charge any fee that is due in this case, if not otherwise timely paid, to Deposit Account No. 07-0845.

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